

APPLICATIONS OF SPACE-CHARGE-LIMITED CONDUCTION INDUCED CURRENT INCREASE IN NITRIDE- OXIDE DIELECTRIC CAPACITORS: VOLTAGE REGULATOR FOR POWER SUPPLY SYSTEM AND OTHERS

Abstract of the Disclosure

A capacitor structure having a re-oxide layer on a nitride layer, wherein an interface between the nitride layer and the re-oxide layer includes electron traps. Characteristics of the carrier traps control a voltage output of the device. The thickness of the nitride layer and the re- oxide layer also control the voltage output. The nitride layer and a re-oxide layer form a dielectric capacitor. The dielectric capacitor undergoes a trap filled limit voltage, wherein a consistent voltage is output for a plurality of currents.

Figures